



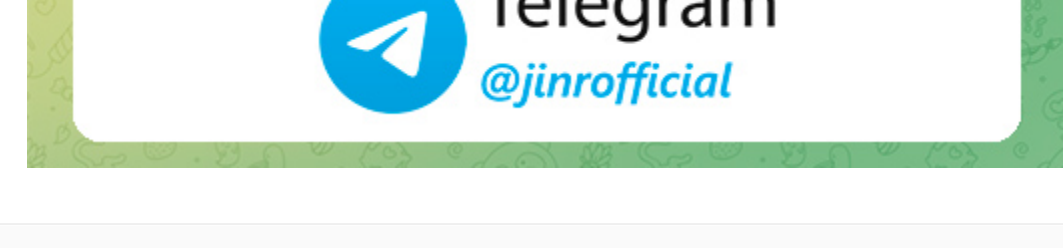
JINR Newsletter #31, 10 August 2023

Dear colleagues and friends,

Traditionally, August is the month of vacations, but the Institute does not slow down. JINR scientists are learning to assess soil pollution using only satellite images, spectroscopy, and mathematics. Registration has been opened for one of the key scientific conferences of the autumn, namely the 25th International Baldin Seminar on High Energy Physics Problems, and the JINR AYSS-2023 Conference of Scientific Youth.

The Institute's publishing infrastructure has obtained new equipment, and the JINR Science and Technology Library has received new books. And you can enjoy a new episode of the podcast with scientists for dessert!

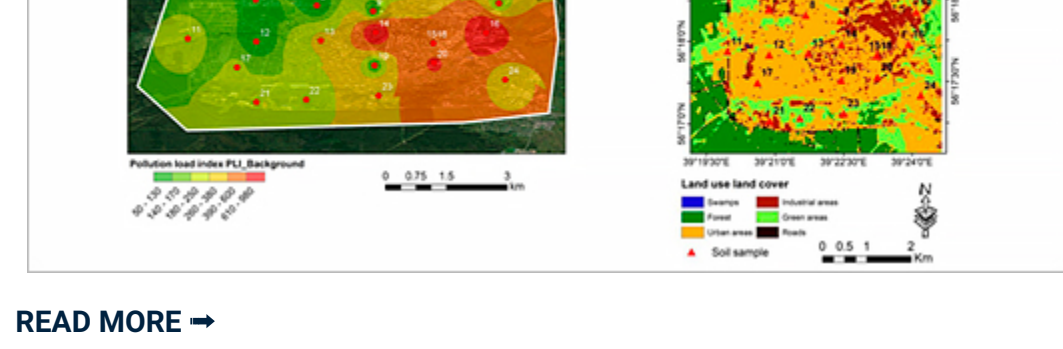
JINR Press Office



Research

JINR scientists working on problem of soil pollution assessment without sampling

FLNP JINR scientists are developing a method of soil contamination assessment without sampling. They use satellite images of an area for analysis. The researchers were able to determine the chemical composition of the soil and its contamination level using spectroscopy and mathematics. This approach has been successfully tested and demonstrated high accuracy.



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New methods in classical and quantum field theories with extended supersymmetry

Scientists from JINR and two Russian universities have obtained important results in the study of low-energy limits of a superstring theory by methods of a supersymmetric field theory. Scientists have formulated new methods for constructing effective actions with the preservation of explicit and hidden symmetries at all stages of calculations and their subsequent application to various field theory models in the classical and quantum domains.

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Infrastructure

New equipment expands JINR publishing capabilities

TERRA PRINT specialists have installed a complex of finishing equipment for the production of hardcover books in the printing house of the Joint Institute for Nuclear Research.



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Dedicated to 110th anniversary of Bruno Pontecorvo

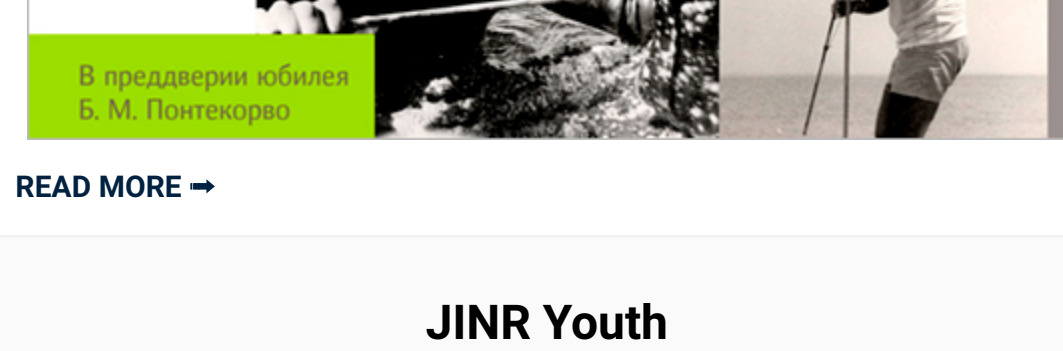
Neutrino oscillations: status and prospects for determination of neutrino mass ordering and leptonic CP-violation phase

On the eve of the 110th anniversary of the birth of Bruno Pontecorvo, a team of DLNP JINR scientists has prepared a review article, from which you will learn about the status and prospects of measuring neutrino oscillation parameters, the status of the NOvA and T2K experiments, the possibilities of studying neutrino oscillations in future accelerator, reactor, and atmospheric experiments.

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About Bruno Pontecorvo's hobbies

The DLNP Group of Scientific Communication has prepared a series of publications on Pontecorvo's biography. In this article, you will learn about things that the scientist enjoyed except for science, namely about his hobbies of tennis, cycling, water and downhill skiing, spearfishing, etc.



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JINR Youth

Digest of main AYSS events

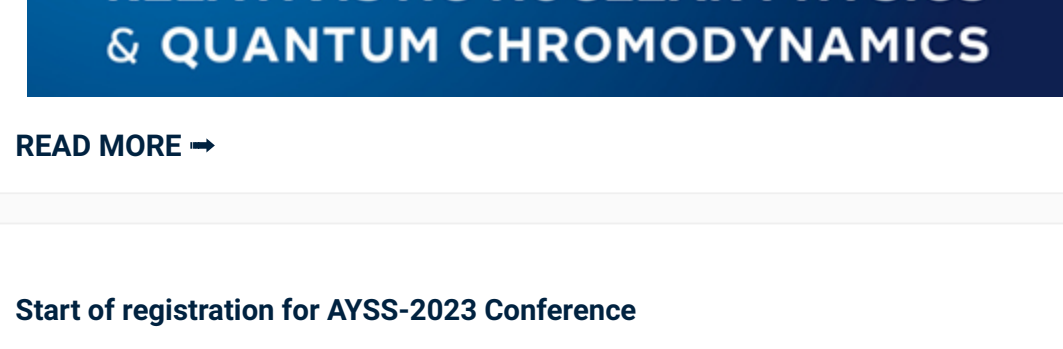
Young scientists and specialists held a traditional Lipnya Summer School, discussed cooperation with representatives of the Council of Young Scientists and the MSU Student Scientific Society in Sarov, won a competition for medals of RAS for young scientists, and much more.

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Announcements

Registration for Baldin Physics seminar

Registration for the 25th International Baldin Seminar on High Energy Physics Problems "Relativistic Nuclear Physics and Quantum Chromodynamics" organized by JINR has started. The seminar will take place on 18 - 23 September at JINR. Registration and submission of abstracts are until 15 August.



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Start of registration for AYSS-2023 Conference

AYSS JINR has announced the start of registration for the 27th International Scientific Conference of Young Scientists and Specialists (AYSS-2023). The event will be held at the Joint Institute for Nuclear Research on 30 October - 3 November.

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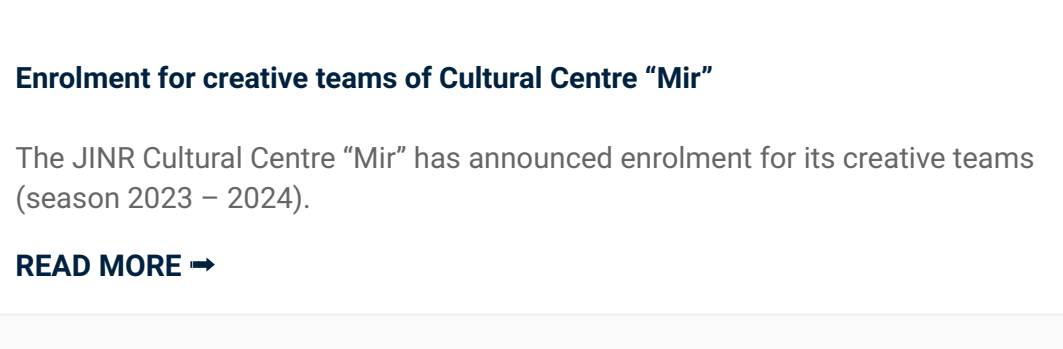
Paintball game

On 19 August, a joint paintball game will be organized for JINR and Tensor employees. The minimum time of the game is 3 hours. Registration lasts until 3:00 PM on 11 August. All interested are welcome to join the event!

SIGN UP →

New JINR bicycles

New bicycles have been delivered to the JINR Nauka Stadium! 44 bicycles of different models are available for rent, namely urban, road, and mountain ones. For convenience, bicycles are equipped with a boot and a basket, and you can also rent a child seat. Phone number for enquiries is +7 (985) 298 99 87.



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Enrolment for creative teams of Cultural Centre "Mir"

The JINR Cultural Centre "Mir" has announced enrolment for its creative teams (season 2023 - 2024).

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Publications

Application of method of moments for doublet and triplet analysis in radiation spectra

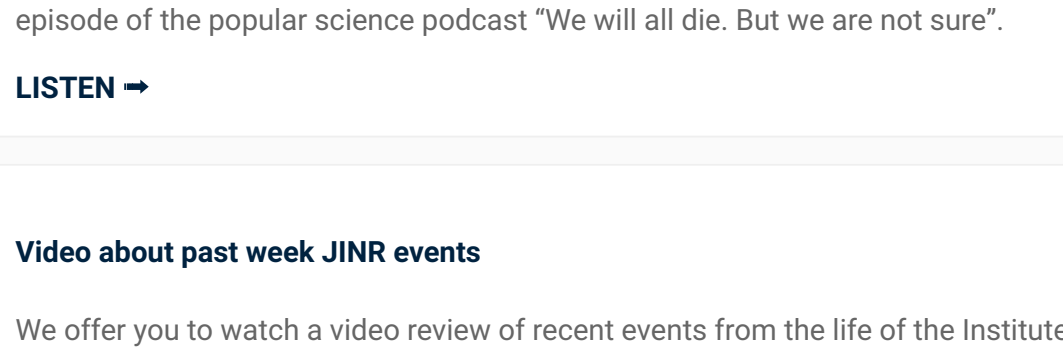
The JINR Publishing Department has issued a preprint "Application of method of moments for doublet and triplet analysis in radiation spectra" E6-2023-29. The author is Igor Izosimov (FLNR JINR).

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Media

JINR superflies on federal Russian TV channel

Why do ordinary fruit flies acquire a superpower - radioresistance - after visiting DLNP JINR? And how will it help colonise Mars? Find out the answers to these questions in the coverage of the Vesti programme. But we know that the secret lies in the protein of unique microorganisms - tardigrades.



WATCH (from 51:42) →

New episode of RIA Novosti podcast with JINR scientist

How to fight cancer tumour cells that are resistant to radiotherapy? How are radiation power and dose connected? What is FLASH radiation therapy? An LRB employee Vladimir Chausov answered these and other questions in a new episode of the popular science podcast "We will all die. But we are not sure".

LISTEN →

Video about past week JINR events

We offer you to watch a video review of recent events from the life of the Institute and Dubna.

WATCH →

Books

S&T Library exhibition "New books"

The JINR Science and Technology Library invites everyone interested to visit the exhibition "New books". The exhibition is taking place on 7 - 18 August.

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Sports

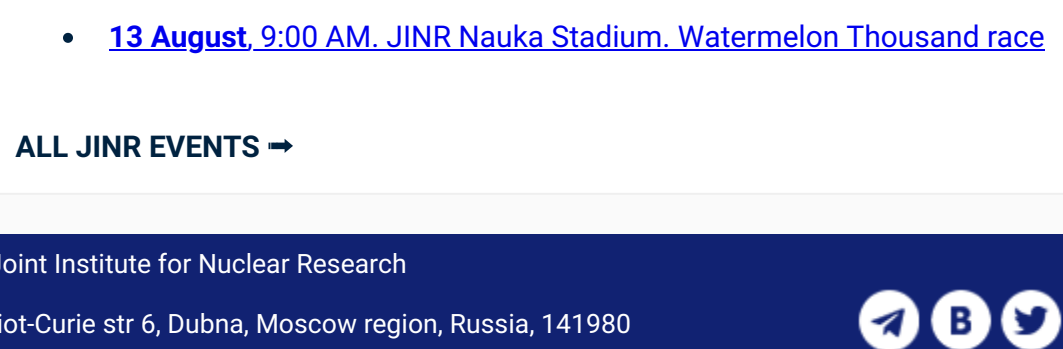
Tennis tournament in memory of Dzhelpev brothers

On 5 and 6 August, the 24th tournament dedicated to the memory of brothers Venedikt and Boris Dzhelpev took place at the Archimedes courts. This is the largest and most the most eagerly awaited tournament of the whole year in Dubna. 44 adults and 16 children took part in the tournament, which is an absolute record in recent years.

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4th Volleyball Festival "Moscow Sea Cup"

On 5 - 6 August, the 4th Beach Volleyball Festival "Moscow Sea Cup" among men's teams took place. The festival was held with the support of JINR and the Dubna Volleyball Federation. Not only athletes from Dubna, but also from Moscow, Yaroslavl, Tver, Voronezh, Ryazan, and other cities met on the banks of the Volga River.



WATCH →

Upcoming Events

Culture

- [11 August, 6:00 PM, JINR Universal Public Library, English speaking club](#)
- [17 August, 7:00 PM, JINR Universal Public Library, Summer Reading List book club: discussing a book "Dragon" by Evgeny Schwartz](#)

Sports

- [13 August, 9:00 AM, JINR Nauka Stadium, Watermelon Thousand race](#)

ALL JINR EVENTS →

